

Title (en)  
PROCESS FOR PRODUCING SUBSTRATE FOR POWER MODULE, SUBSTRATE FOR POWER MODULE, AND POWER MODULE

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINES TRÄGERS FÜR EIN STROMMODUL, TRÄGER FÜR STROMMODUL UND STROMMODUL

Title (fr)  
PROCÉDÉ DE FABRICATION DE SUBSTRAT POUR MODULE DE PUISSANCE, SUBSTRAT POUR MODULE DE PUISSANCE, ET MODULE DE PUISSANCE

Publication  
**EP 2214201 A1 20100804 (EN)**

Application  
**EP 08851237 A 20081119**

Priority  
• JP 2008071018 W 20081119  
• JP 2007299385 A 20071119

Abstract (en)  
A method for manufacturing a power module substrate (10), includes: preparing a ceramics substrate (11) and a metal plate (22, 23) made of pure aluminum; a fusion step in which the ceramics substrate (11) and the metal plate (22, 23) are stacked in layers with a brazing filler metal (24, 25) interposed therebetween, and a fused aluminum layer (26, 27) is formed at an interface between the ceramics substrate (11) and the metal plate (22, 23) by fusing the brazing filler metal (24, 25) which is caused by heating; and a solidifying step in which the fused aluminum layer (26, 27) is solidified by cooling, and a crystal is grown so as to be arranged in a crystal orientation of the metal plate (22, 23) when the fused aluminum layer (26, 27) is solidified.

IPC 8 full level  
**B23K 1/00** (2006.01); **B23K 1/19** (2006.01); **H01L 23/12** (2006.01); **H01L 23/36** (2006.01); **H05K 3/38** (2006.01)

CPC (source: EP US)  
**B23K 1/0016** (2013.01 - EP US); **B23K 1/19** (2013.01 - EP US); **H01L 21/4803** (2013.01 - EP US); **H01L 23/15** (2013.01 - EP US); **H01L 23/3735** (2013.01 - EP US); **H05K 3/38** (2013.01 - EP US); **B23K 2101/40** (2018.07 - EP US); **B23K 2103/10** (2018.07 - EP US); **B23K 2103/18** (2018.07 - EP US); **B23K 2103/52** (2018.07 - EP US); **H01L 2224/32225** (2013.01 - EP US); **H05K 1/0306** (2013.01 - EP US); **H05K 1/09** (2013.01 - EP US); **H05K 3/0061** (2013.01 - EP US); **H05K 2203/128** (2013.01 - EP US); **Y10T 428/12007** (2015.01 - EP US); **Y10T 428/12736** (2015.01 - EP US); **Y10T 428/24917** (2015.01 - EP US); **Y10T 428/24926** (2015.01 - EP US)

Cited by  
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AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**EP 2214201 A1 20100804**; **EP 2214201 A4 20170201**; **EP 2214201 B1 20180919**; CN 101861647 A 20101013; CN 101861647 B 20121205; HK 1147140 A1 20110729; JP 2009147316 A 20090702; JP 4747315 B2 20110817; KR 101083618 B1 20111116; KR 20100093515 A 20100825; US 2010285331 A1 20101111; US 8116084 B2 20120214; WO 2009066692 A1 20090528

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**EP 08851237 A 20081119**; CN 200880116192 A 20081119; HK 11101087 A 20110201; JP 2008071018 W 20081119; JP 2008294598 A 20081118; KR 20107005373 A 20081119; US 73464608 A 20081119